

(Per ILA Approval Requirements)

☐ CA Approval

☒ JB Approval

**REGIONAL FARE COORDINATION SYSTEM
CHANGE ORDER NO. 11**

CONTRACTOR: ERG Transit Systems (USA) Inc.
CONTRACT NUMBER: 229944

This Change Order to Contract #229944 ("Change Order") is executed as of 11/30/05, by and between ERG Transit Systems (USA) Inc, a California corporation and wholly owned subsidiary of ERG Limited, an Australian corporation, (hereinafter referred to as the "Contractor") and each of the following seven public transportation agencies (hereinafter referred to individually as an "Agency" or collectively as the "Agencies"):

1. Central Puget Sound Regional Transit Authority ("Sound Transit")
2. King County ("King County")
3. Kitsap County Public Transportation Benefit Area ("Kitsap Transit")
4. Pierce County Public Transportation Benefit Area ("Pierce Transit")
5. Snohomish County Public Transportation Benefit Area ("Community Transit")
6. City of Everett ("Everett")
7. State of Washington, acting through the Washington State Department of Transportation, Washington State Ferries Division ("WSF")

Background

- A. Effective April 29, 2003, each of the Agencies and the Contractor entered into Contract #229944 ("Contract") to implement a Regional Fare Coordination System ("RFC System") to establish a common fare system utilizing smart card technology. The Contractor is responsible for the development, implementation, operation and maintenance of the RFC System as specified in the Contract.
- B. The Agencies and the Contractor desire to execute Change Order No. 11 to update the WSF fare collection requirements, relative to integration with its new Point of Sale system. Gate Adaption Kits (GAK) will replace previous referenced, Standalone Fare Transaction Processors (SAFTP) as specified in this Change Order. The Portable Fare Transaction Processor (PFTP) Smart Card & Barcode WSF integration is not included in this Contract Change Order.

The Agencies and the Contractor hereby agree to the following changes to the Contract.

1.0 Division I Changes

1.1 The Agencies and the Contractor hereby agree to Amendment Ten without further execution, a copy of which is attached hereto as "Change Order No. 11 –Attachment A."

1.2 Exhibit 9 "Price Schedule" is hereby amended as shown in "Change Order No. 11 – Attachment B", attached hereto for the additions described below:

- a) In Section II add new item I., WSF Gate Adaption Kit (GAK) at costs \$1,519 per unit
- b) In Section VI, add new item G., WSF GAK Integration lump sum costs \$78,816
- c) In Section VI, 1., add new item I., WSF GAK Implementation lump sum costs \$241,584
- d) In Section VIII, On-site Maintenance add new item I., WSF GAK On-Site Maintenance monthly cost per unit is \$480.91 for 4 or less units, \$452.02 for 5 to 10 units, and \$436.21 for over 10
- e) In Section VIII, Technical Support Services add new item I., WSF GAK Technical Support Services monthly cost per unit shall be \$3.12 for 4 or less units, \$2.97 for 5 to 10 units, and \$2.94 for over 10 units

2.0 Division II Changes

2.1. 6.II Section 11.I.2.7 "Washington State Ferries" is hereby amended to read as follows:

The following requirements shall apply to implementation of the RFCS (including Beta Test equipment) at Washington State Ferries:

- (a) The Beta Test shall consist of equipment installed at one terminal and possibly two routes out of that terminal (to be specified by WSF at Conceptual Design Review).
- (b) The Beta Test may include one Customer Service Terminal (CST) for WSF.
- (c) Equipment rollout shall occur by terminal, by route.
- (d) On-site installation of equipment shall occur during the days and times as directed by Washington State Ferries.
- (e) No system start-up shall occur on the day of a seasonal fare or schedule change. These occur three times a year.

- (f) The interface between the RFCS and WSF Electronic Fare System (EFS) shall be included in the Beta Test.
- (g) GAK Design Revision work shall include Design Specifications as delivery for FDR NAC:
 - 1. Completion of all work associated with the provision of DR112 up to and including the FDR approval.
- (h) GAK Design Integration and Testing shall include the following:
 - 1. Completion of the Detailed interface design (Protocol modifications required to be made to the baseline communications protocol as supplied as a separate document from DR112) by ERG during the period leading up to FDR submission of DR112b.
 - 2. Implementation of all software interface changes.
 - 3. Implementation of any functional changes required during the initial Final Design Review process to the GAK Gate & POS and BOC applications software to fulfill the functional solution as described in DR112.
 - 4. Provision of integration support required ensuring the successful technology integration of the EFS and ERG solutions.
 - 5. Testing of all ERG supplied software requiring adequate support by the EFS solution provider in regard to joint integration and testing.
 - 6. Provision of any ERG supplied Technology required for the development of the POS / Fare Gate Solution both by ERG and the EFS Solution Provider (as detailed within the Integration section of DR112).
 - 7. Provision of implementation (Installation, commissioning) support services.
- (i) The scope of work does not include any post Beta design review or technology update other than rebuild of software based on RFC system wide changes in association with Card format, Business Rule Implementation, User Data (UD)/Configuration Data (CD) changes due to Data Acquisition Computer (DAC)/Back Office Client Application (BOC) changes, and Clearing House (CHS) agreed changes.

2.2 Figure II-11.3 has been revised to include DR 112a and DR 112b as shown in "Change Order 11 - Attachment C" attached hereto.

3.0 Division III Changes

- 3.1 Certain sections of Division III are amended, as set forth in this Change Order. The following is a summary of said changes:
- 3.1.1 Contract Sections 6.III-9.1 "Subsystem Description – Stand-Alone FTP" and 9.2 "Functional Requirements – Stand-Alone FTP" have been revised to remove reference to WSF for SAFTP as shown in "Change Order No. 11 - Attachment D" attached hereto. The requirements may still be valid for Kitsap Transit and are retained in the DR 106 design documentation (with reference to WSF deleted).
 - 3.1.2 Contract Sections 6.III-12.1 "Subsystem Description – Data Collection System" and 12.3 "Performance Requirements – Data Collection System" have been revised to include GAKs and reference to WSF DR 112 as shown in "Change Order No. 11 - Attachment E" attached hereto.
 - 3.1.3 Contract Section 6.III-16.6 "Data Exchange and Back Office Integration" has been revised to replace the term FTPs with GAK, revise Figure III-16.1 to be finalized at FDR, revise figure to insert GAK in place of FTPs, replace reference to DR 110.16 with DR 112, add new section referencing document for protocol modifications as shown in "Change Order No. 11 - Attachment F" attached hereto.
 - 3.1.4 Add new Contract Section 6.III-17 "Gate Adaption Kits" that defines the requirements for Gate Adaption Kits as shown in Change Order No. 11 - Attachment G" attached hereto.
- 3.2 Design review documents shall be submitted as follows:
- 3.2.1 DR 112a shall be submitted in FDR form, and DR 112b submitted in PDR and FDR forms. WSF will accept an updated version of the material contained in RFCS RFI 057 as an acceptable document for DR 112b PDR submission. The contents of that RFI, Section 3.1 and 3.2 will also form the basis for the hardware description in DR 112a.
 - 3.2.2 DR 112 shall also include selected WSF-specific items/sections from other Design Review documents as follows:

Any applicable sections of DR 109 (Data Collection System - DACS) and DR 110 (Back Office Client Application - BOC) related specifically to the integration of the DAC and BOC in WSF's environment. This does not impact the general requirements for the DAC, BOC or reporting as described, nor does it impact other Agencies.

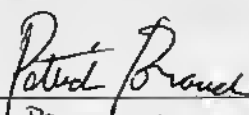
This revision does not in any way affect or impact SAFTP requirements for Sound Transit and Kitsap Transit; these requirements remain per the Contract.

4.0 Other Terms and Conditions

- 4.1 Except as expressly amended by this Change Order, the Contract remains in full force and effect. All other provisions of the Contract not referenced in this Change Order No. 11 shall remain in effect unless modified in other executed Amendments and Change Orders.

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: 
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

By: _____
Its: _____
Date: _____

City of Everett

By: _____
Its: _____
Date: _____

King County

By: _____
Its: _____
Date: _____

Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: *Patrick Brand*
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

By: *Joan M. Earl*
Its: CEO
Date: 8-30-05

City of Everett

By: _____
Its: _____
Date: _____

King County

By: _____
Its: _____
Date: _____

Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

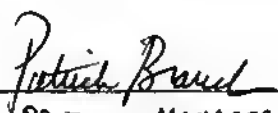
By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

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ERG Transit Systems (USA) Inc.

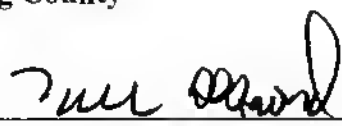
By: 
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

By: _____
Its: _____
Date: _____

King County

By: 
Its: G.M.
Date: 9/5/05

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

City of Everett

By: _____
Its: _____
Date: _____

Kitsap County Public Transportation Benefit Area

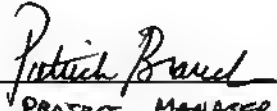
By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: 
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

City of Everett

By: _____
Its: _____
Date: _____

By: _____
Its: _____
Date: _____

King County


Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

Snohomish County Public Transportation Benefit Area

By: 
Its: CE
Date: 8/30/05

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: _____

Its: _____

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, Washington State Department of Transportation

By: W. Michael Anderson

Its: Executive Director

Date: August 26, 2005

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

The Agencies

By: _____
Its: _____

Date: _____

By: _____
Their _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____
Its: _____
Date: _____

King County

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

City of Everett

By: Paul G. Stephenson
Ray Stephenson, Mayor, or His Designee
Date: 10/28/05

ATTEST:
By: Sharon Marks
Sharon Marks, City Clerk
Date: 11/30/05

APPROVED AS TO FORM:

By: James D. Iles
James D. Iles, City Attorney
Date: 11/28/05

Kitsap County Public Transportation Benefit Area

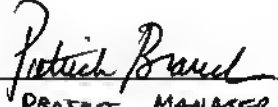
By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: 
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

City of Everett


By: _____
Its: _____
Date: _____

By: _____
Its: _____
Date: _____

King County

Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

By: 
Its: EXEC DIR
Date: 8/25/05

Pierce County Public Transportation Benefit Area

Snohomish County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 11 to Contract #229944 as of the date set forth below its signature.

ERG Transit Systems (USA) Inc.

By: *Patrick Boud*
Its: PROJECT MANAGER

Date: 23-AUG-05

Central Puget Sound Regional Transit Authority

By: _____
Its: _____
Date: _____

King County

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Washington State Ferries, Washington State Department of Transportation

By: _____
Its: _____
Date: _____

City of Everett

By: _____
Its: _____
Date: _____

Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

By: *Lois S. Olson*
Its: 9/02/05 CEO
Date: 9/02/05

Amendment Ten to the Contract for the Design, Implementation, Operation and Maintenance of the Regional Fare Coordination System

This Amendment Ten to the Contract for the Design, Implementation, Operation and Maintenance of the Regional Fare Coordination System is incorporated into Contract Change Order No. 11.

Recitals

- A. A. Effective April 29, 2003, each of the Agencies and the Contractor entered into Contract #229944 ("Contract") to implement a Regional Fare Coordination System ("RFC System") to establish a common fare system utilizing smart card technology. The Contractor is responsible for the development, implementation, operation and maintenance of the RFC System as specified in the Contract.
- B. The Agencies and the Contractor desire to enter into this Amendment Ten to revise certain sections in Division I of the Contract to update the WSF fare collection requirements, relative to integration with its new Point of Sale System.

Amendments

NOW, THEREFORE, in consideration of the mutual covenants contained herein, in Change Order No 11, and in the Contract, the sufficiency of which is hereby acknowledged, each Agency and the Contractor hereby agree to amend the Contract as follows:

Section 1.0 Section 3.1-28, "Agency Caused Delays" is hereby amended to read as follows:

28.1 Agency Caused Delays are delays that affect a Critical Path as defined in the approved Baseline Project Schedule and arise from the following matters and no others: (a) a suspension order pursuant to Section 3.1-30 not caused by the actions or inactions of the Contractor, (b) failure or inability of the Agencies to obtain the permits it agrees in its sole discretion to obtain, (c) failure of the Agencies to provide availability of Transit/Ferry facilities according to the schedule for such availability provided by the Agencies, (d) failure of the Agencies to provide operation rules in a timely manner, (e) unavoidable delay caused by governmental action which is beyond the control of and could not have been reasonably anticipated by the Contractor, (f) failure of the Agencies to comply with Section 2.1-2.3, (g) failure of the Agencies to deliver hardware and interface specifications associated with the integration to the McCain Interface Unit ("MIU"), (h) failure of the Agencies to deliver interface specifications associated with the integration of the WSF EFS (Electronic Fare System), WSF's new Point of Sale (POS) system, with the RFCS, and (i) any additional Work requested by the Agencies. Any court order to suspend Work shall not be considered an Agency Caused Delay (although it may qualify as a Force Majeure Event) despite the fact that the Agencies may specifically direct the Contractor to comply with the court order.

Section 2.0 Section 3.1-76.3.5, "Equipment" is hereby amended to add new subsection (e) as follows:

e. For Washington State Ferries ONLY, payment for one hundred percent (100%) of its Gate Adaption Kits (GAK) hardware as specified in Exhibit 9, Section II I., and delivered to WSF is payable upon completion of Beta Test Readiness Acceptance. The GAK hardware includes, but is not limited to, the GAK Fare Processor and Target.

Section 3.0 New Section 76.3.11 "Integration with WSF Point of Sale System and Related Equipment" is hereby added to define the payment terms for integration and implementation lump sum costs to read as follows:

- a. Payment for thirty percent (30%) of the lump sum costs specified for WSF GAK Implementation at the price specified in Exhibit 9, Section VI. I., will be payable upon system-wide Final Design Review Acceptance.
- b. Payment for thirty-five (35%) of the lump sum costs specified for WSF GAK Implementation at the price specified in Exhibit 9, Section VI. I., will be payable upon system-wide Beta Test Readiness Acceptance.
- c. Payment for thirty-five (35%) of the lump sum costs specified for WSF GAK Implementation at the price specified in Exhibit 9, Section VI. I., will be payable upon system-wide Beta Test Acceptance.
- d. Payment for one-hundred (100%) of the WSF GAK Integration lump sum costs specified in Exhibit 9, Section I. G., will be payable upon system-wide Final Design Review Acceptance.

Section 4.0 All other provisions of the Contract not referenced in this Amendment Ten shall remain in effect unless modified in other executed Amendments and Change Orders.

Addition to Exhibit 9 Price Schedule

Add new item I:

II. EQUIPMENT Prices

Range of Quantities

I.

WSF Gate Adaption Kits (GAK)	125 or less		
PRICE PER UNIT	\$1,519		

Add new item G:

V. INTEGRATION AND REPORTING

LUMP SUM COST

1. INTEGRATION COSTS

A. (deleted per Change Order No. 5)	
B. Back Office Data Integration with existing Agency system(s), including: Back Office client application and hardware	\$246,668
C. RCU Integration	\$86,500
D. Inventory System Software (CARM)	\$72,319
E. DDU - Community Transit Integration (6.III-6.8.4)	\$70,959
F. DDU - Integration with GFI Farebox (6.III-6.8.2)	\$26,738
G. WSF GAK Integration (6.II - 11.1.2.7)	\$78,816
TOTAL (A)	\$582,000

2. REPORTS

A. Standard Reports (as listed in Section 6.III-13)	\$563,812
TOTAL (B)	\$563,812

GRAND TOTAL (A + B):	\$1,145,812
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Add new item I:

VI. IMPLEMENTATION

LUMP SUM COST

1. PHASE 1 (up to and including Beta Test Acceptance)

I. WSF GAK Implementation

WSF GAK Implementation	\$241,584
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All costs associated with any travel deemed required by the EFS solution provider and ERG (as detailed within the Integration plan section of DR112) is included in the above WSF GAK implementation cost.

TOTAL (A):	\$11,314,679
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Add new items I:

VIII. MAINTENANCE SERVICE CONTRACT

ON-SITE MAINTENANCE

Monthly Cost per Unit

Range of Quantities

I.

	4 or less	5-10	Over 10
WATER ADAPTATION KIT (GAK)			
COST PER EVENT, PER UNIT	\$480.91	\$458.02	\$436.21

TECHNICAL SUPPORT SERVICES

Monthly Cost per Unit

Range of Quantities

I.

	4 or less	5-10	Over 10
TECHNICAL SUPPORT			
MONTHLY COST PER UNIT	\$3.12	\$2.97	\$2.94

Additions to Figure II-11.3 Design Review Items

Add to Division III Design Review Items:

DR	Reference	Description	Group
112a	6.III-17	WSF Integration Hardware	Group 3
112b	6.III-17	WSF Integration Functionality	Group 3

Revisions to Sections 6.III-9

6.III-9 Stand-Alone Fare Transaction Processor**6.III-9.1 Subsystem Description - Stand-Alone FTP**

Stand-Alone FTPs (SAFTP) (DR 106) shall be ruggedized devices installed at Sound Transit Stations, and shall be designed for pedestal or wall mounting. Two SAFTP configurations shall be supplied:

1. An SAFTP equipped with zone/destination buttons for Sound Transit (DR 106.01). Passengers will select the number of zones of travel prior to presenting the fare card for payment.

At a minimum, the SAFTP shall consist of the modules listed in Figure III-9.1.

**Figure III-9.1
FTP CONFIGURATION SUMMARY**

Modules	Stand-Alone FTP
* Central Processing Unit	X
* Contactless Card Interface	X
* Customer Display/Indicator	X
Power Supply	X
* Communications with DAC	X
Pedestal/wall mount	X
Selection Buttons	X (ST Only)

"X" denotes module required by Contract

* Module described in Section 6.III-3

6.III-9.2 Functional Requirements - Stand-Alone FTP

The following functional requirements supplement those stated in Section 6.III-3.2.

- (a) Log-on from Agency personnel shall occur via a log-on smart card, through a command issued through the DACS (to activate all FTPs at a station).
- (h) Zone selection buttons (Sound Transit only) shall allow a customer to select a destination zone. The SAFTP shall calculate the fare based on the origin and destination zones or stations.
- (c) The SAFTP (Sound Transit configuration) shall be supplied with up to 10 zone selection buttons. The final number of zone selection buttons shall be determined at PDR (CDRL 2)

Revisions to Sections 6.III-12.1 and 12.3

6.III-12.1 Subsystem Description - Data Collection System

The data collection system (DR 109) shall consist of distributed data acquisition computers (DACs) throughout the region. DACs collect the data from On-Board, Portable and Stand-alone FTPs, GAKs or other designated RFCS equipment for transfer to the clearinghouse and provide the relevant Agency with duplicate data files of the data files transferred to the clearinghouse.

6.III-12.3 Performance Requirements - Data Collection System

- (a) The Contractor shall provide a detailed plan that describes the methodology of capturing and processing the data to be used to measure availability (DR 109.01).
- (b) This plan is subject to Contract Administrator review and approval.
- (c) The Contractor may add equipment or increase system redundancy levels in order to meet or exceed availability requirements.
- (d) System availability shall be measured at a minimum for the following:
 - i. DAC shall be available to transmit data to the clearinghouse 99.73% and to on- and off-load the data from the FTPs 99.73% during the scheduled time periods for these activities.
 - ii. The combined system elements such as FTP, WDOLs, DAC, and clearinghouse system shall be available 99.73% of the time when they are required for system operation.

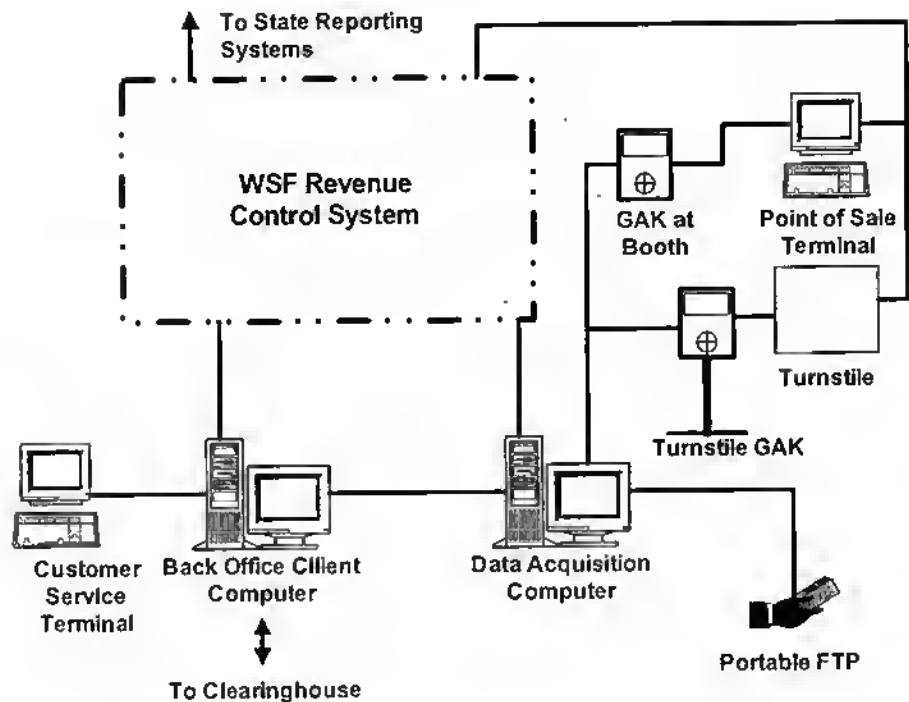
Revisions to Section 6.III-16.6

6.III-16.6 Data Exchange and Back Office Integration

Washington State Ferries is in the process of replacing its existing Point of Sale (POS) system with a new Electronic Fare System (EFS). The Contractor shall meet the following requirements for the integration of RFCS equipment with the EFS:

- (a) All records shall be of transaction-level detail and will be used by the EFS to process transactions and generate reports. Transaction-level data will also be transferred to other WSF and Washington State Department of Transportation systems. An example of transaction level data recorded by the current POS system is included in Appendix B-6.
- (b) The RFCS shall provide three interfaces to the EFS as illustrated in Figure III-16.1. The final architecture of the EFS and associated interfaces will be determined at Preliminary Design Review (CDRL 2). Interfaces shall include:
 - i. A direct interface between GAKs installed at WSF toll booths and seller point of sale terminal. The point of sale terminal will determine the fare to be deducted (fare basis). The GAKs shall act as a peripheral to, and be under the operational control of, the point of sale terminal. The GAK shall deduct fares based on a fare basis message from the point of sale terminal, shall generate transaction detail and acknowledgment messages for the point of sale terminal, and shall forward transaction data to the RFCS.
 - ii. An interface between data acquisition computers installed at WSF and the EFS to transmit in near real-time fare transactions from Portable FTPs.
 - iii. An interface between the Back Office Computer and EFS for back office data integration as described in Section 6.III-13.

Figure III-16.1
WSF INTERFACES (To be finalized at FDR)



- (c) The Contractor shall provide an Interface Control Document (DR 112) fully describing these interfaces. This information will be provided to the RCS system developer.
- (d) For direct communications between the FTP and clearinghouse, a transparent path will be provided for batch data transfer through the RCS. The Contractor shall define requirements for such data transfer in DR110.16.
- (e) Completion of the detailed interface design (Protocol modifications required to be made to the baseline communications protocol as supplied) will be provided as a separate document from DR112 by ERG during the period leading up to FDR submission of DR112b. The documents will describe the inter-device communication mechanism between the ERG GAK and a WSF POS, and the inter-device communication mechanism between the ERG GAK and a WSF gate. The physical communication method and protocol will be described in detail.

Add new Section 6.III-17

6.III-17 WSF Gate Adaption Kits**6.III-17.1 Subsystem Description – Gate Adaption Kits**

Gate Adaption Kits (GAK) (DR112) shall be devices installed in Washington State Ferries (WSF) tollbooths and turnstiles. GAKs shall be designed for wall mounting of the GAK in tollbooths, mounting in turnstiles and remote mounting of the card reader.

- a) The Kiosk GAK (DR 112) shall be designed for integration as a peripheral to a new Point of Sale (POS) system being developed by WSF and shall include an interface for integration with the WSF Electronic Fare System (EFS) as a fare card payment-processing device.
- b) The GATE GAK (DR 112) shall be designed for integration with Turnstiles that are a component of the new POS system being developed by WSF and shall include an interface for integration with the WSF EFS as a fare card payment-processing device.

At a minimum, the GAKs shall consist of the modules listed in Figure 1-17.1

**Figure 1-17.1
GAK CONFIGURATION SUMMARY**

Modules	GAK
Central Processing Unit	X
Contact less Card Interface	X
Card Reader	X
Power Supply Requirements	X
Communications with DAC and WSF revenue system	X

6.III-17.2 Functional Requirements – Gate Adaption Kits

The following functional requirements supplement those stated in Section 6.III-3.2.

- (a) All Operational control of the GAK will be from the WSF EFS system via the Gate Controller (Inside the Gate) for the Gate and from the Point of Sale device for the POS.
- (b) The GAK supplied for WSF shall be able to conduct fare transactions as follows:
 - i. Automatically with no toll booth seller interaction when a card is presented and a default fare deducted or pass recorded.
 - ii. Through manual fare determination from the WSF POS system. In this case, the fare will be computed by the WSF POS system, with the GAK acting as a payment acceptance peripheral. Valid pass products shall be recognized and applied to the cost of the fare. The remaining fare shall be deducted from stored value.

17.3.1 Structural Features

- (a) The GAK mounts shall be designed for installation inside WSF tollbooths and turnstiles.

6.III-17.4 Data Exchange Requirements – Gate Adaption Kits

- (a) GAKS shall include a communications module for connecting to a DAC.
- (b) GAKs shall include a standard serial interface, designed for connection to the WSF POS system. The Contractor shall provide an Interface Control Document (DR 112) fully describing this interface.

6.III-17.5 Installation Requirements – Gate Adaption Kits

- (a) GAKS shall be designed to be installed on the tollbooth interior wall or inside a turnstile.
- (h) The Contractor shall provide the Contract Administrator and WSF with the bolt pattern mounting requirements and electrical/communications construction and connection details.
- (c) Conduit, and power and communications cables leading from the power and communications sources to the junction box shall be installed by the WSF. Connections from the junction box to the GAK shall be the responsibility of the Contractor.
- (d) Contractor shall make final connections (plug-in) to power and communications.
- (e) WSF will provide the turnstiles with cut outs for card readers and mounting studs for the GAK.
- (f) WSF will provide a weatherproof electrical box at the exterior of the vehicle tollbooths for mounting of the card readers connected to the GAK installed in the interior of the tollbooths.